RECLAMATION

Managing Water in the West

Draft Environmental Assessment

ANNEXATION OF SUBORDINATE LANDS IN CHOWCHILLA WATER DISTRICT

EA-07-44

U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
South Central California Area Office
Fresno, California

May 2008

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List of Acronyms, Abbreviations and Definition of Terms

af	acre-feet (the volume of water one foot deep and an acre in area)
af/y	acre-feet per year
cfs	cubic feet per second
City	City of Chowchilla
CNDDB	California Natural Diversity Database
Corps	Army Corps of Engineers
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
CWD	Chowchilla Water District
DWR	California Department of Water Resources
EA	Environmental Assessment
ESA	Endangered Species Act
FWCA	Fish & Wildlife Coordination Act
FWS	US Fish and Wildlife Service
ITA	Indian Trust Assets
LAFCo	Local Agency Formation Commission
MP	mile post
NHPA	National Historic Preservation Act
NEPA	National Environmental Policy Act
Reclamation	Bureau of Reclamation
RRA	Reclamation Reform Act
SOI	Sphere of Influence
SWP	State Water Project

Figures and Tables

Section 1 Purpose and Need for Action

1.1 Background

The Bureau of Reclamation (Reclamation) proposes to approve the annexation of 3,393.34 acres of subordinate farmlands into Chowchilla Water District (CWD) as specified in CWD's long-term water service contract (Contract Number 175r-2358-IRl). CWD and the proposed annexation lands are located in Merced and Madera Counties on the eastside of the San Joaquin Valley.

Reclamation had received three separate requests from CWD in 1997, 1998 and 2000 to annex subordinate land into CWD through Article 29 of their contract. All lands have been approved by CWD's Board of Directors and Madera County Local Agency Formation Commission (LAFCo), (under whose jurisdiction they fall), before water can be delivered to this farm land.

CWD originally proposed to annex about 10,000 acres:

- Annexation #1 = 1850.91 acres March 11, 1998 approved by LAFCo
- Annexation #2 = 1056.85 acres. April 1, 1999 approved by LAFCo
- Annexation #3 was never completed and it has been abandoned.

The current annexation under consideration is Annexation #4 which is also called Annexation 2005-01. Annexation 2005-01 is the subject of this Proposed Action. This annexation request started out as 41 parcels (5876.34 acres.) However it was discovered that 18 of the parcels were not in the CWD Sphere of Influence (SOI). The Proposed Action has been limited to those parcels within CWD's SOI and that the Madera County Local Agency Formation Commission (LAFCo) has approved, therefore Annexation 2005-01 was reduced to 23 parcels (3393.62 acres is the correct acreage.)

CWD has applied for a change in the CWD SOI for the remaining 18 parcels (2482.72 acres.) When the SOI change for CWD is completed, CWD will apply to annex all or part of the 18 parcels in the SOI (2482.72 acres.) (D Welch Personal Communication March 13, 2008)

EA-01-92, completed July 7, 2003, evaluated the annexation of approximately 8300 acres. Because of acreage inconsistencies within EA-01-92, EA-07-44 is being completed to clarify the inclusion acreages under consideration and make sure that full environmental analysis has been completed.

CWD is located in northern Madera and Merced Counties and is bisected by Highway 99. The district is located on the east side of the San Joaquin Valley and spans from the trough of the valley on the west side of the district to the base of the Sierra Nevada foothills on the east.

1.2 Purpose and Need

The purpose of the annexations is to include the lands into CWD's water service area. These inclusions are needed to allow CWD to provide surface irrigation water for established crops on these lands at such time as water is available and to reduce groundwater overdraft. Since CWD spans from the trough of the San Joaquin Valley to the base of the Sierra Nevada foothills, the depth to groundwater varies substantially over the district from relatively shallow near the trough on the western end of CWD to several hundred feet near the eastern edge of the district. As the depth to groundwater increases, the cost of pumping groundwater increases. The low cost to pump groundwater on the western side of the district entices landowners in the region to rely on groundwater. This has two impacts to CWD: 1) it depletes the overall groundwater supplies underneath the district and 2) it reduces the market for surface water in wet years when full contract supplies are available. Providing water to the subordinate lands, which currently rely on groundwater will alleviate some of the groundwater pumping and also supply a market to CWD for their water supplies in wet years.

Reclamation's role and purpose for the Proposed Action is to review the annexations pursuant to Article 29 of CWD's long-term Central Valley Project (CVP) water service contract. (See Appendix A for Article 29 contract language.) Reclamation's service area and boundary change approval requirement is intended to determine whether the use of CVP water within CWD would be contrary to the terms of the contract, impair the ability of the contractor to pay for CVP water furnished under the contract or to pay for any Federally-constructed facilities for which the contractor is responsible, and/or have an impact on any CVP water rights applications, permits, or licenses.

1.3 Scope

This Environmental Assessment (EA) has been prepared to examine the impacts on environmental resources as a result of Reclamation's inclusion of the proposed parcels into CWD's service area boundary resulting in CVP water serving a broader area than it does currently. The water would be delivered for agricultural purposes to existing agricultural lands. The water would be delivered inside the Friant Unit water rights permits agricultural place of use boundary. This EA will look at the effects to CWD and the lands proposed to be included. These lands are all within Madera and Merced Counties and are in Township 9 and Range 16 and 17 Mount Diablo Meridian.

1.4 Potential Issues

- Water Resources
- Land Use
- Biological Resources
- Cultural Resources
- Indian Trust Assets
- Socioeconomic Resources
- Environmental Justice

Section 2 Alternatives Including Proposed Action

2.1 Alternative A – No Action

Under the No Action Alternative, Reclamation does not approve the inclusion. Surface and groundwater use would continue as historically utilized.

2.2 Alternative B - Proposed Action

Reclamation would approve the annexation of 3,393.62 acres of land to be included in CWD's CVP water delivery service area. See Table 1 below for the specific parcels and see Figure 1 to see where these parcels lie relative to CWD's current service area boundary. This would allow the application of CVP water onto the listed parcels.

CWD's Board of Directors has designated these landowners as "subordinate annexors." These "subordinate annexors" would be supplied only when surplus water from Reclamation contracts and existing CWD rights is available over and above the needs of "original landowners." ("Original landowners" are those landowners that were within CWD's CVP service area boundary prior to inclusions.) No additional water would be diverted from the San Joaquin River or Chowchilla River. No additional contract supplies would be delivered as contract quantities would not be altered.

TABLE 1
Subordinate Lands Subject to Annexation
Chowchilla Water District
I75r-2358R Supplemental Agricultural Water Service
Acreage: 3393.62 acres

Owner	APN	Acres	Sec.	T.	R.	Land use within last 10 - 15 years
Richard Debenedetto	026-040-002	190.15	11	9 S.	16 E.	Dry Crops/Grazing/Almonds c. 1995
	026-100-001	315.46	14	9 S.	16 E.	Dry Crops/Grazing/Almonds c. 1995
	026-100-002	318.49	14	9 S.	16 E.	Dry Crops/Grazing/Almonds c. 1995
	026-160-001	131.02	14	9 S.	16 E.	Dry Crops/Grazing/Almonds c. 1995
	030-021-002	106.13	12	9 S.	16 E.	Dry Crops/Grazing/Almonds c. 1995
	030-061-007	148.07	13	9 S.	16 E.	Almonds 10-15 yrs

Owner	APN	Acres	Sec.	T.	R.	Land use within last 10 - 15 years
	030-061-006	158.29	13	9 S.	16 E.	Dry Crops/Grazing/Almonds c. 1995
Campos Brothers	030-041-003	77.52	10	9 S.	17 E.	Dry Crops/Fig Orchard
	030-041-004	160.00	10	9 S.	17 E.	Dry Crops/Fig Orchard
	030-041-005	160.00	10	9 S.	17 E.	Dry Crops/Fig Orchard
	030-041-006	160.00	10	9 S.	17 E.	Dry Crops/Fig Orchard
	030-042-002	80.00	11	9 S.	17 E.	Dry Crops/Fig Orchard
	030-042-005	88.75	11	9 S.	17 E.	Dry Crops/Fig Orchard
	030-042-006	151.25	11	9 S.	17 E.	Dry Crops/Fig Orchard
	030-042-008	79.88	11	9 S.	17 E.	Dry Crops/Fig Orchard
	030-042-007	78.96	11	9 S.	17 E.	Dry Crops/Fig Orchard
	030-042-009	79.12	11	9 S.	17 E.	Dry Crops/Fig Orchard
	030-090-001	160.00	14	9 S.	17 E.	Dry Crops/Fig Orchard
	030-090-002	158.79	14	9 S.	17 E.	Dry Crops/Fig Orchard
	030-080-002	160.00	15	9 S.	17 E.	Dry Crops/Fig Orchard
	030-080-008	160.00	15	9 S.	17 E.	Dry Crops/Fig Orchard
	030-010-002	113.74	2	9 S.	17 E.	Dry Crops/Fig Orchard 10-15 yrs
Vernon Eck	068-170-016	158.00	32	8 S.	17 E.	Fig Orchard 10-15 yrs
Total		**3393.62**				

Minor construction would occur to connect the annexed lands to CWD's distribution system. These facilities would consist of buried pipelines along dirt roads and across highly disturbed lands as well as the building of one new turnout. The Campos property is riparian and an existing turnout for diversion of riparian water that would be used for diversion of CVP water. A single turnout at mile post (MP) 35.26 was built on the Madera Canal to serve the DeBenedetto Property. A turnout would be constructed by the landowner on the Chowchilla River and a 10

inch pipeline would be constructed within the Merced County Road right-of-ways to deliver water to the Eck property. A trencher would be used to excavate the trench for the pipe. See Figure 1. (D Welch Personal Communication May 5, 2008)

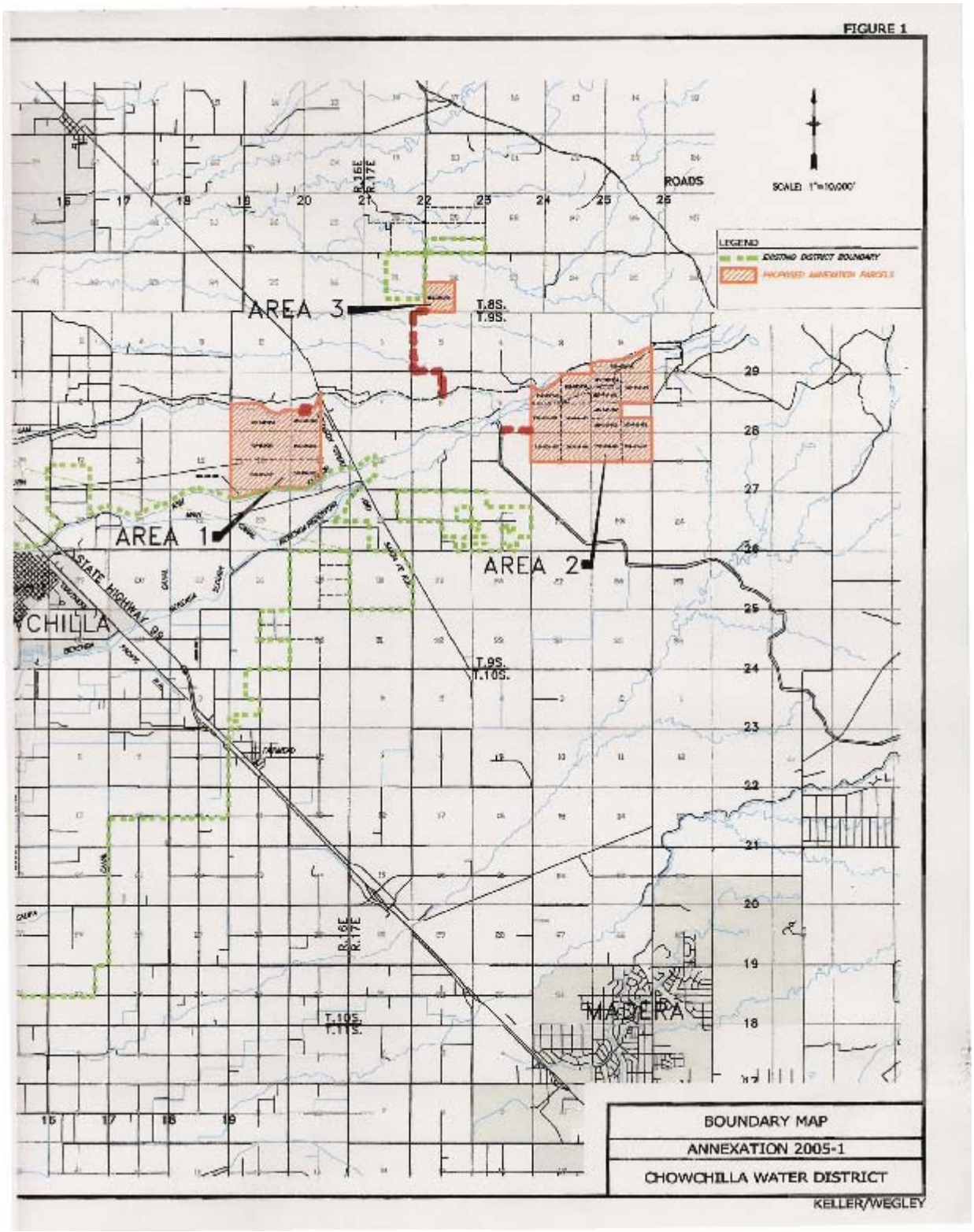

Figure 1. Map of Parcels and Connections, (Area 1 are the Richard DeBenedetto parcels; Area 2 are the Campos Bros. Farms parcels; Area 3 is the Vernon Eck parcel)

Section 3 Affected Environment & Environmental Consequences

3.1 Water Resources

3.1.1 Affected Environment

Background

In 1950, CWD executed a contract for water from the Friant Unit of the CVP with first deliveries in the early 50's. CWD has a contract supply of 55,000 acre-feet per year (af/y) of Class 1 and 160,000 af/y of Class 2 water from the Friant Unit. CWD is the northern most federal water supply contractor on the Friant Unit. Class 1 water is considered to be a relatively reliable supply with 100 percent of this supply being available in most years except for dry years. Class 1 water is typically available on the schedule requested by the water district. Class 2 water on the other hand, is less reliable with only a portion of the full contract supply being available in all but the wettest years. Additionally this water may not be schedulable throughout the entire contract year. Reclamation may make a greater quantity of this water available during a short period of time when it is essential to draw down the reservoir and therefore it is advantageous for a water district to have opportunities to maximize deliveries over a relatively short time frame.

In 1968, CWD and La Branza Water District contracted an additional Class 2 water supply from Buchanan Dam to be constructed on the Chowchilla River. The Buchanan Unit is part of the CVP but is not operationally integrated into the Friant Unit. Although Buchanan Reservoir is an Army Corps of Engineers (Corps) facility, Reclamation markets the stored water on behalf of the Corps. The Buchanan contract is for 24,000 af/y. The Buchanan Unit geographically overlaps the Friant service area.

CWD transferred 16 percent of its Friant Class 2 water supply from the 1950 contact to La Branza Water District. In 1988, the La Branza lands were annexed into the CWD to become an equal right holder under the 1950 and 1968 contracts. The original 1950 contract was renewed on August 30, 1991.

CWD does not operate groundwater wells or supply municipal and industrial water. The district relies on conjunctive use of its Class 2 water supply with the use of private wells to supply much of the farm delivery water requirements.

Non-CVP Water Supplies

CWD also has other non-CVP water rights permits. CWD has a license to divert up to 11.4 cfs from Berenda Slough and Ash Slough from February 1 to November 1 that can be used to irrigate 2,305 acres. Also CWD has a license to divert up to 90 cfs from the Chowchilla River from February 1 to November 1 that can be used to irrigate 51,500 acres.

CVP Surface Water Supplies

Water used to irrigate crops on land within the boundaries of CWD comes primarily from contracts with Reclamation. These can include CVP Classes 1 and 2, or Section 215 water (temporary water service contracts of non-storable flood flows for irrigation water authorized under Section 215 of the Reclamation Reform Act (RRA) of October 12, 1982, (96 Stat. 1263), as amended. This supply of water is temporary, not to exceed one year, and is made possible as a result of (1) an unusually large supply not otherwise storable for project purposes or (2) infrequent and otherwise unmanaged flood flows of short duration.) Additional supplies in the district come from landowner pumped groundwater, and, as previously mentioned, district water from Buchanan Reservoir, and water transfers.

Table 2 shows the high variability in surface water supply. The flood control releases to the Chowchilla River and 215 Contract supplies allow the district additional opportunities in wet years to provide additional recharge to the over-drafted groundwater basin. When water is transferred out it is because either CWD cannot use it on the lands in the district and/or the price for selling the water may provide incentives for the transfers. A high priority is put on recharging the groundwater as having groundwater available in a dry year is important to a conjunctive use district such as CWD.

TABLE 2
Surface Water Supply Water Variability
Chowchilla Water District
175r-2358R Supplemental Agricultural Water Service

Chowchilla Water District Deliveries – Water Years 1982 - 2007

Water Year Mar. 1- Feb 28	Friant Service Area % Class 1 Allocation (of 55,000AF)	Friant Service Area % Class 2 Allocation (of 160,000 AF)	Class 1 Used AF	Class 1 Trans-ferred In	Class 1 Trans-ferred Out AF	Class2 Used AF #1	Class 2 Trans-ferred Out AF	Flood Control Releases to Chowchilla River (AF)	215 Water AF	Buchanan Unit Deliveries #2	Total Deliveries
2007 - 2008	65	0	35,462	670	0	0	0	0	0	72,455	108,652
2006 - 2007	100	10	34,994	0	20,000	52,465	0	44,202	4,000	69,358	225,129
2005 - 2006	100	10	55,000	0	0	62,439	0	16,600	3,000	57,831	194,980
2004 - 2005	100	18	54,296	2,000	0	16,625	10,000	0	0	20,478	103,517
2003 - 2004	100	8	54,715	10,500	0	33,812	0	0	0	12,532	111,667
2002 - 2003	100	8	55,073	240	0	12,800	0	0	0	22,833	91,054
2001- 2002	100	5	55,416	0	0	9,738	0	0	0	74,028	139,287
2000- 2001	100	17	51,463	0	3,200	61,614	0	0	0	60,333	176,727
1999- 2000	100	20	55,000	0	0	34,574	0	0	10,763	44,283	144,740
1998- 1999	100	10	26,756	0	0	16,000	0	75,502	0	78,291	196,659

Water Year Mar. 1- Feb 28	Friant Service Area % Class 1 Allocation (of 55,000AF)	Friant Service Area % Class 2 Allocation (of 160,000 AF)	Class 1 Used AF	Class 1 Trans-ferred In	Class 1 Trans-ferred Out AF	Class2 Used AF #1	Class 2 Trans-ferred Out AF	Flood Control Releases to Chowchilla River (AF)	215 Water AF	Buchanan Unit Deliveries #2	Total Deliveries
1997-1998	100	60	55,000	0	0	81,521	0	25,805	0	42,999	205,485
1996-1997	100	58	35,000	0	20,000	84,033	8,000	496	0	55,345	203,032
1995-1996	100	100	7,593	0	10,000	56,649	105,351	83,214	32,179	63,671	358,857
1994-1995	80	0	44,000	0	0	0	0	0	0	57,640	101,720
TOTAL	**1,345**	**324**	**619,768**	**13,410**	**53,200**	**522,270**	**123,351**	**245,819**	**49,942**	**732,077**	**2,361,506**
Average	**96**	**23**	**44,269**	**958**	**3,800**	**37,305**	**8,811**	**17,559**	**3,567**	**52,291**	**168,679**

#1 - Class 2 usage can exceed the allocation due to uncontrolled declarations during the year in addition to the allocation percentage. Additional data for Class 2 usage was not researched prior to 1993.

#2 - Although Buchanan Unit deliveries are only charged for 24,000 af/y, deliveries are the amount that the system evolves in that year so they are frequently greater than the 24,000 af/y.

Water Distribution

CWD receives CVP water from the Madera Canal from Millerton Lake to the district's headwork facilities located on Ash Slough about seven miles west of the City of Chowchilla (City). The Chowchilla River supplies water from Eastman Lake to the same headwork facilities. Water can be diverted from the headwork facilities to the Chowchilla River, the Ash Slough or the Berenda Slough. Each of these water ways are used to convey water further downstream to CWD's canal system.

CWD is divided into two divisions, the La Branza and Chowchilla divisions. Water diverted at the headworks into the Chowchilla River is delivered to the La Branza Division. The La Branza Division has a small reservoir (Minturn Dam, 100 acre-foot (af) capacity) which is used to regulate the flows into the La Branza Canal. The Chowchilla Division has a much larger reservoir (Berenda Reservoir, 1,000 af capacity), which is used to store and regulate flows into the Main and Califa Canals. The entire distribution system is gravity flow. Eight regulating/recharge ponds, are used to regulate flows midstream, capture spill at the ends of canals which then can be pumped into another canal system and/or recharge the groundwater. The ponds hold 10 to 50 af each.

Groundwater

CWD operates approximately 160 miles of unlined canals and eight recharge ponds to recharge the groundwater. An estimated 40 percent to 50 percent (an average of about 65,000 af) of the surface water delivered is recharged through seepage. During surplus water supply years, additional water is purchased and directed down the Berenda and Ash Sloughs to provide additional groundwater recharge. The depth to groundwater in the area of the district presently averages 148 feet, however it varies from 10 to 190 feet. See Figure 2. Although the level rises and falls depending upon yearly rainfall conditions, the groundwater level has been falling at a rate of 1 ½ feet per year for the last 25 years. CWD is within the Chowchilla sub-basin of the San Joaquin River groundwater basin.

Although a detailed groundwater budget was not available for this sub-basin, an estimate of groundwater demand was calculated based on the 1990 normalized year and data on land and water use. A subsequent analysis was done by a DWR water budget spreadsheet to estimate overall applied water demands, agricultural groundwater pumpage, urban pumping demand and other extraction data. (DWR 2004)

Natural recharge of the sub-basin is estimated to be 87,000 af. Artificial recharge and subsurface inflow are not determined. There is approximately 179,000 af of applied water recharge. Annual urban and agricultural extractions are 6,000 af and 249,000 af, respectively. There are no other extractions and subsurface outflow has not been determined. (DWR 2004)

Changes in groundwater levels are based on annual water level measurements by DWR and cooperators. On average, the sub-basin water level has declined nearly 40 feet from 1970 through 2000. The period from 1970 through 1978 showed steep declines totaling about 30 feet. The nine-year period from 1978 to 1987 saw stabilization and rebound of about 25 feet, taking the water levels close to where they were in 1970. 1987 through 1996 again showed steep declines, bottoming out in 1996 at about 45 feet below 1970 levels. Water levels rose about 8 feet from 1996 to 2000. Water level declines have been more severe in the eastern portion of the sub-basin from 1980 to the present, but the western basin showed the strongest declines before this time period. (DWR 2004)

CWD and Red Top Resources Conservation District have entered into a Joint Powers Authority to develop a coordinated AB 3030 groundwater management plan in the Chowchilla groundwater basin. The plan was adopted December 3, 1997.

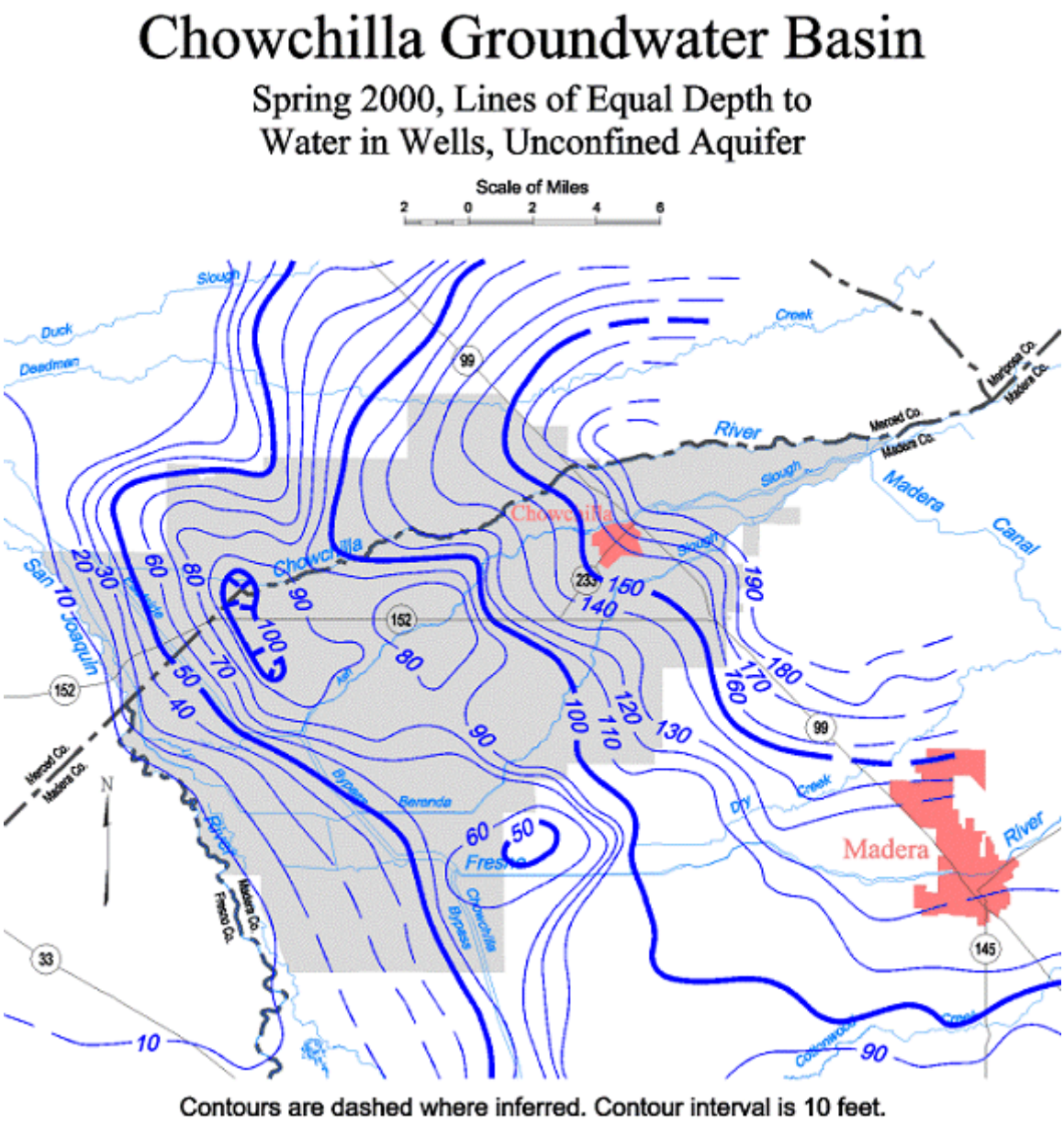

Figure 2

3.1.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, CWD would continue to utilize CVP contract supplies as they have historically. Landowners would continue to pump groundwater as they have historically and the groundwater overdraft would continue as it has historically. CVP water supply deliveries would not change.

Proposed Action

The proposed annexation of lands would not result in changes to existing water resources. No additional water would be diverted from the San Joaquin River or Chowchilla River. The landowners within the annexed area would be "subordinate annexors" as water would be supplied only when water surplus to Reclamation contracts and existing District rights are available over and above the needs of "original landowners."

Surplus CVP water is a short-term supply and is typically declared during times when it is not needed and lands are already saturated. The decision to utilize this surplus water for recharge or delivery to subordinate annexors would likely be based on hydrological conditions at the time it is available. Groundwater pumping in the annexed area would likely decrease as a result of the Proposed Action. Since the groundwater overdraft in the basin is significant, the intermittent reduction of groundwater pumping by the landowners in the included 3,392 acres would be a small percentage of the 255,000 af of groundwater pumping in the sub-basin.

Global climate change is expected to have some effect on the snow pack of the Sierra Nevadas and the run off regime. Current data is not yet clear on the hydrologic changes and how they will affect the Friant or Buchanan Units. Although the action would extend for the remainder of CWD's long-term contract (through 2025) and potentially beyond, no new water would be diverted or delivered to CWD. The water supply to CWD delivered under Reclamation's contract would be dependent on water allocations. These water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility and therefore water resource changes due climate change will be the same with or without this project. CWD would receive the same water allocation with or without the project. The district makes the determination to which of its landowners the water will be delivered. Since the included lands are made up of "subordinate annexors" who have a lower priority to receive CVP water supplies, and if global climate change reduces CVP supplies, then there will be no additional affect to CWD's current landowners due to this Proposed Action.

3.2 Land Use

3.2.1 Affected Environment

The original size of CWD was 64,097 total acres with 48,789 irrigated acres. The current size is approximately 80,690 total acres with 58,637 irrigated acres (Friant Long-Term Contract Renewal EA, 2000). The potential inclusion would add approximately four percent to the district service area. The main land use in CWD is agricultural. The main crops grown in CWD are cotton, almonds, alfalfa, wheat, corn and grapes. The gradual sloping topography in CWD does not constrain or limit farming practices or water use efficiency.

CWD surrounds, but does not serve the City. The City relies on groundwater as its water supply and is responsible for the production and delivery of potable water supplies for its urban customers.

The annexed lands would be subject to RRA, including acreage limitation and classification for irrigation suitability. All of the annexed lands have been classified as required by Reclamation law. Though the gross annexed acreage may include small parcels of Class 6 land (land deemed unsuitable for agriculture), no Class 6 land within it is allowed to receive water. This Class 6 land can include areas such as storage for farm equipment, houses, rights-of-way, ditches, canals, and roads as well as vernal pools and wetlands though it is not specified which of these are within the gross acreage here. Compliance with these stipulations will be verified by Reclamation staff.

All land considered in this annexation presently are cultivated. No vernal pools or wetlands occur within the annexation. Field inspections by Reclamation staff verified that the lands proposed to be annexed have established fig, almond, and pistachio orchards, field crops and fallowed or idled fields, however, most of the acreage is presently planted in figs or almond orchards.

Land classification field inspections were made in June and July of 2001. Most of the farms are planted with permanent crops and have been for many years. Table 2 lists the land uses within the last 15 years.

The major infrastructure improvements for water delivery are already in place for the lands proposed for annexation.

3.2.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there are no impacts to land uses since conditions would remain the same as exiting conditions.

Proposed Action

The majority of the land use in the project area is agricultural. No significant changes would occur to land uses as a result of the annexation of these lands. Construction activities for connecting the annexed lands to CWD's distribution system includes burying pipes along existing dirt roads and across already highly disturbed lands. The impact to land uses due to this construction is temporary.

3.3 Biological Resources

3.3.1 Affected Environment

The following list was obtained on May 5, 2008, by accessing the U.S. Fish and Wildlife Database: http://www.fws.gov/pacific/sacramento/es/spp_lists/auto_list.cfm. The list is for the Firebaugh NE, Raynor Creek, Le Grand, Berenda, Plainsburg, El Nido, Bliss Ranch, Chowchilla quads (FWS, 2006).

TABLE 3: FEDERAL STATUS SPECIES ON FRIANT QUAD LISTS FOR CWD

Common Name	***Species Name***	***Fed Status***	***ESA***	***Summary basis for ESA determination***
Blunt-nosed leopard lizard	*Gambilia sila*	E	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Conservancy fairy shrimp	*Branchinecta conservatio*	E	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Conservancy fairy shrimp, critical habitat		CH	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
California red-legged frog	*Rana aurora draytonii*	T	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Central Valley steelhead	*Oncorhynchus mykiss*	T	NE	No effect on natural stream systems
Delta smelt	*Hypomesus transpacificus*	T	NE	No downstream effects from action
Fresno kangaroo rat	*Dipodomys nitratoides exilis*	E	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Giant garter snake	*Thamnophis gigas*	T	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Fleshy Owl's Clover Fleshy Owl's Clover- Critical Habitat	*Castilleja campestris spp. Succulenta*	T CH	NE NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
San Joaquin kit fox	*Vulpes macrotis mutica*	E	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.

San Joaquin Valley Orcutt Grass San Joaquin Valley Orcutt Grass critical habitat	*Orcuttia inaequalis*	T CH	NE NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Greene's tuctoria Greene's tuctoria critical habitat	*Tuctoria greenei*	E CH	NE NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Vernal pool fairy shrimp - critical habitat		CH	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Vernal pool tadpole shrimp	Lepidurus packardi	E	NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.
Vernal pool tadpole shrimp - critical habitat Valley elderberry longhorn beetle	Desmocerus californicus dimorphus	CH T	NE NE	No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities. No land use changes would occur as a result of this action., no conversion of habitat, and no new facilities.

Reclamation Endangered Species Act (ESA) policy dictates that all water deliveries within Friant CVP contractor's service areas, which would include the included lands, will occur in accordance with the requirements specified in the Friant Unit Biological Opinion and the conservation and restoration plans. Included within these requirements is the requirement that no native land will be converted to agricultural lands with CVP water. All lands under consideration for inclusion are currently cultivated. No vernal pools or wetlands occur within the proposed annexation.

Reclamation submitted the Biological Assessment for the *"Annexation of Subordinate Lands into Chowchilla Water District,"* dated July 22, 2002 and the Supplemental, dated January 15, 2003 which are hereby incorporated by reference. The Service has completed a Biological Opinion (Memorandum dated April 11, 2003) concurring with Reclamation that the proposed annexations would not likely adversely affect threatened or endangered species or their habitat. A more complete description of habitat types and list of species with an emphasis on threatened and endangered species in the action area are contained in the above referenced documents.

3.3.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there are no impacts to biological resources since conditions would remain the same as exiting conditions since all land uses remain the same.

Proposed Action

The proposed inclusion would not result in impacts to biological resources. Water would be conveyed in existing facilities with the exception of minor construction to connect the annexed lands into CWD's distribution system. This minor construction includes routing pipelines along existing dirt roads and across highly disturbed lands. This construction activity would be short term and would not result in any long-term noise or nuisance to biological resources. The CVP water would be delivered to existing agricultural and tilled lands.

3.4 Cultural Resources

3.4.1 Affected Environment

"Cultural resources" is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The San Joaquin Valley is rich in historical and prehistoric cultural resources. Cultural resources in this area are generally prehistoric in nature and include remnants of native human populations that existed before European settlement. Prior to the 18th Century, many Native American tribes inhabited the Central Valley. It is possible that many cultural resources lie undiscovered across the valley. The San Joaquin Valley supported extensive populations of Native Americans, principally the Northern Valley Yokuts, in the prehistoric period. Cultural studies in the San Joaquin Valley have been limited. The conversion of land and intensive farming practices over the last century has probably destroyed many Native American cultural sites.

The CVP is being evaluated for the National Register of Historic Places (NRHP). Facilities include the Friant Dam and the Friant-Kern Canal.

Friant Dam is located on the San Joaquin River, 25 miles northeast of Fresno, California. Completed in 1942, the dam is a concrete gravity structure, 319 feet high, with a crest length of 3,488 feet. The Friant-Kern Canal carries water over 151.8 miles in a southerly direction from Millerton Lake to the Kern River, four miles west of Bakersfield. The water is used for supplemental and new irrigation supplies in Fresno, Tulare, and Kern Counties. Construction of the canal began in 1945 and was completed in 1951.

3.4.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there are no impacts to cultural resources since conditions would remain the same as exiting conditions.

Proposed Action

Including lands into CWD would not result in impacts to archeological or cultural resources. These lands are agricultural lands that have undergone cultivation and land disturbance for more than 20 years. The minor construction activities associated with connecting the annexed lands to CWD's distribution system consists of buried pipelines along existing dirt roads and across highly disturbed lands.

Reclamation is in the process of a complying with Section 106 of the NHPA and will consult as appropriate.

3.5 Indian Trust Assets

3.5.1 Affected Environment

Indian trust assets (ITAs) are legal interests in assets that are held in trust by the U.S. Government for federally recognized Indian tribes or individual Indians. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. "Assets" are anything owned that holds monetary value. "Legal interests" means there is a property interest for which there is a legal remedy, such a compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. ITAs cannot be sold, leased or otherwise alienated without United States' approval. ITAs may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITAs may be located off trust land.

Reclamation shares the Indian trust responsibility with all other agencies of the Executive Branch to protect and maintain ITAs reserved by Indian tribes, or individual Indians by treaty, statute, or Executive Order.

3.5.2 `Environmental Consequences

No Action Alternative

Under the No Action Alternative there are no impacts to ITAs, since conditions would remain the same as exiting conditions.

Proposed Action

There are no tribes possessing legal property interests held in trust by the United States in the water involved with this action, nor is there such a property interest in the lands designated to receive the water proposed in this action.

There are no ITAs, Indian Reservations, or public domain allotments found within CWD. The Proposed would not effect or interfere with the observation of religious or other ceremonies associated with ITAs.

3.6 Socioeconomic Resources

3.6.1 Affected Environment

Merced County ranks fifth and Madera County ranks fourteenth in the State for producing agricultural products and contributes substantially to the agricultural industry in the State. One in four jobs in the San Joaquin Valley is attributed to this agricultural industry. The delivery of affordable surface water supplies maintains crop productions and provides assurances for farmers and their bankers to secure loans.

In some cases no charges are assessed during periods when surplus water is declared to provide incentives for districts to take these potentially damaging flood flows. This benefit provides incentives for groundwater recharge as surplus water is usually available during times when it is not needed for crop production. Conversely, depending upon hydrological conditions lands may already be saturated and this water would likely be delivered to the "subordinate landowners" but only after the "original landowners" needs have been met.

Table 4
CWD's CVP Water Rates

Unit	Contract Rate	O&M	Cost of Service	Full Cost 202(3)	Full Cost 205(a)(3)
*Buchanan	18.10	14.54	18.10	24.48	26.86
Friant Class 1	26.42	14.54	26.42	36.42	43.35
Friant Class 2	13.47	6.86	13.47	16.80	21.28

*CWD pays for 24,000 af/y from the Buchanan Unit whether or not it is used.

In addition to the above charges in Table 4, a Friant surcharge of $7.00 and $8.79 per af for restoration payments are added to the price of the water pursuant to the California Valley Project Improvement Act.

As stated earlier, CWD is the northernmost federal contractor on the Friant delivery system and is bounded by non-federal water districts and lands that have no surface water supplies. These growers pump from the underground at prices as low as $14.00 per af using diesel or off-peak PG&E rates. Growers within CWD also use this same strategy. However, CWD charges growers for water whether they use it or not. Thus water costs, including water assessments for growers in CWD are approximately $110. 00 per af compared to $45.00 to $70.00 per af for growers outside CWD. Increased water rates for surface water could provide incentives for growers within CWD to pump groundwater. CWD strives to investigate and implement water

pricing methods that will promote the efficient conjunctive use of its groundwater and surface water supplies.

The subordinate landowners (annexors) pay increasing high costs to drill new wells which more often either are dry or must go deeper and deeper to reach water. Other costs include major time interferences in necessary crop watering schedules to allow wells to replenish available water supplies.

3.6.2 Environmental Consequences

No Action Alternative

Without Reclamation's approval, the County would seek other sources of water that would likely be higher in costs. This increase in costs would be localized and short-term. The County could implement water conservation measures and restrict water usage. Home and aesthetic values could be reduced temporarily in an area known for its affluence. This reduction would not result in a long-term decline in home or aesthetic values. Employment opportunities for landscapers and gardeners could be reduced temporarily. It is unlikely water supplies would be reduced for the golf course.

Proposed Action

The proposed annexation would not result in decreasing CWD's ability to fulfill its CVP repayment contract requirements. The annexed landowners in this Proposed Action would be "subordinate annexors" as water would be supplied only when water surplus to Reclamation contracts and existing CWD rights is available over and above the needs of "original landowners." No increases or decreases of agricultural lands would occur as a result of the annexation of lands. Decisions by landowners to interrupt timing of necessary crop watering schedules to allow wells to replenish available water supplies and to preclude pumping of groundwater would likely be based on hydrological and economical conditions unrelated to Reclamation's approval for the annexation of lands. The acceptance of surplus water at reduced rates by the "subordinate landowners" would not result in any significant increased or decreased economic benefits. This surplus water is an intermittent and temporary supply and is typically declared during times when it is not needed for crop production. This water would likely be used for recharging the groundwater to be later extracted for use on existing agricultural lands.

3.7 Environmental Justice

3.7.1 Affected Environment

Executive Order 12898, dated February 11, 1994, requires Federal agencies to ensure that their actions do not disproportionately impact minority and disadvantaged populations.

The market for seasonal workers on local farms draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America. The population of some small

communities typically increases during late summer harvest overwhelming local water and sewage facilities and causes public health problems.

3.7.2 Environmental Consequences

No Action Alternative

Landscaping and gardening jobs are typically filled by minority population groups. It is likely the County would find another source of water to meet its customer's demands. If surface and groundwater resources are not feasible, employment opportunities and conditions for low income or disadvantaged populations could be reduced. This reduction would be short-term until the request to change the Place of Use boundary is complete or an alternate source of water is found.

Proposed Action

The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease. The Proposed Action would not disproportionately impact economically disadvantaged or minority populations. There would be no changes to existing conditions. The delivery of water at a reasonable price ensures low wage jobs are available. The unemployment rate within CWD's service area suggests that any actions that maintain seasonal jobs should be considered beneficial. Employment opportunities for low-income wage earners and minority population groups would be within historical conditions. Disadvantaged populations would not be subject to disproportionate impacts.

3.8 Cumulative Impacts

The Proposed Action was found to have no impact on biological resources, cultural resources, Indian trust assests, and socioeconomics and therefore there is no contribution to cumulative impacts on these resources areas. Temporary construction impacts on land use will occur but due to their temporary nature they will not contribute to cumulative impacts. Water resources will have minor positive impacts due to groundwater pumping reductions however these reductions will be within the variability of historic groundwater pumping and are occurring in an overdrafted basin so there will be no cumulative effects to water resources. Slight beneficial impacts to environmental justice are also within the historical variations and would not contribute to cumulative impacts. Overall there will be no cumulative impacts caused by the Proposed Action.

Section 4 Consultation and Coordination

4.1 Fish and Wildlife Coordination Act (16 USC § 651 et seq.)

The Fish and Wildlife Coordination Act requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources. The implementation of the CVPIA, of which this action is a part, has been jointly

analyzed by Reclamation and the FWS and is being jointly implemented. The Proposed Action does not involve construction projects. Therefore the FWCA does not apply.

4.2 Endangered Species Act (16 USC § 1521 et seq.)

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

The Proposed Action would support existing uses and conditions. No native lands would be converted or cultivated with CVP water. The water would be delivered to existing homes, through existing facilities, as has been done in the past, and would not be used for land conversion. Therefore, the Proposed Action would have no effect on federally listed threatened or endangered species or their designated habitats.

Reclamation consulted with the Service and a reference number was assigned (1-1-03-11723). On April 11, 2003, a memorandum was issued by the Service concurring with Reclamation's conclusion that the proposed Chowchilla Water District Annexations in Madera and Merced Counties, California, is not likely to adversely affect listed species. The Service based their concurrence on information and verification that all of the lands in question are currently under cultivation. The Service is concerned about the relative ease with which new lands can obtain contract rights to CVP surface supplies through annexations. Groundwater supplies may be recharged through the use of CVP surface water and used for additional habitat conversion. Reclamation and the Service are working towards providing positive incentives for water districts to maintain native habitat and certain cultivated lands suitable for listed species. In addition, Reclamation and the Service have drafted Guidelines for Land Conversions. The Service also had concerns that the relationship between general annexations and the provision of CVP water to establish or sustain new agricultural lands contributes nothing toward protection, restoration and enhancement of fish, wildlife and associated habitats in the Central Valley. The Service urges Reclamation to conduct water needs analysis for future annexations and subsequently assure equal sharing of any additional CVP water supplies to meet the needs of fish and wildlife resources and Section 3406(a)(1) of the CVPIA.

4.3 National Historic Preservation Act (15 USC § 470 et seq.)

Section 106 of the NHPA requires federal agencies to evaluate the effects of federal undertakings on historical, archaeological and cultural resources. Due to the nature of the proposed project, there will be no effect on any historical, archaeological or cultural resources, and no further compliance actions are required.

4.4 Migratory Bird Treaty Act (16 USC Sec. 703 et seq.)

The Migratory Bird Treaty Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the Act, the Secretary of the Interior (Secretary) may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

The Proposed Action would have no effect on birds protected by the Migratory Bird Treaty Act.

4.5 Executive Order 11988 – Floodplain Management and Executive Order 11990-Protection of Wetlands

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The project would not affect either concern.

Section 5 List of Preparers and Reviewers

Judi Tapia, Natural Resource Specialist, SCCAO
Patti Clinton, Natural Resource Specialist, SCCAO – reviewer
Michael Inthavong, Natural Resource Specialist, SCCAO – reviewer
Ned Gruenhagen, PHd, Wildlife Biologist

Section 6 References

Programmatic Environmental Impact Statement for the Implementation of the Central Valley Improvement Act, dated October 1999, Reclamation.

Biological Opinion for Long-Term Renewal Contracts for the Friant Division, January 2001, FWS

Biological Opinion (1 -1 -9 1 -F-22) for Interim Renewals of Water Service Contractors, October 15, 1991, FWS

Biological Opinion (1-1-95-F-39) for Interim Renewals of Water Service Contractors, February 27, 1995, FWS

D Welch Personal Communication 3/5/08 – E-mail from Doug Welch, District Manager, 3-5-08

D Welch Personal Communication 5/5/08 – E-mail from Doug Welch, District Manager, 5-5-08

DWR 2004 - California Groundwater Bulletin 118, http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-22.05.pdf accessed 5/5/08

DWR 2004 a Department of Water Resources – Groundwater Basin Maps from Bulletin 118 http://www.sjd.water.ca.gov/groundwater/basin_maps/maps/chow_d00/index.cfm accessed 5/5/08

Friant Long-Term Contract Renewal EA, 2000

Reclamation 2006 - Final Environmental Assessment, Accelerated Water Transfers and Exchanges, Central Valley Project Contractors, Friant Division (EA-06-18)

Appendix A

Contract Requirements
Under the section titled, "CHANGES IN CONTRACTOR'S SERVICE AREA," paragraph 35. (a) and (b):

(a) While this Contract is in effect, no change may be made in the Contractor's Service Area or boundaries, by inclusion or exclusion of lands, dissolution, consolidation, merger, or otherwise, except upon the Contracting Officer's written consent.

(b) Within thirty (30) days of receipt of a request for such a change, the Contracting Officer will notify the Contractor of any additional information required by the Contracting Officer for processing said request, and both parties will meet to establish a mutually agreeable schedule for timely completion of the process. Such process will analyze whether the proposed change is likely to: (I) result in the use of Project Water contrary to the terms of this Contract; (ii) impair the ability of the Contractor to pay for Project Water furnished under this Contract or to pay for any Federally-constructed facilities for which the Contractor is responsible; and (iii) have an impact on any Project Water rights applications, permits, or licenses. In addition, the Contracting Officer shall comply with the National Environmental Policy Act and the Endangered Species Act. The Contractor will be responsible for all costs incurred by the Contracting Officer in this process, and such costs will be paid in accordance with Article 25 of this Contract.